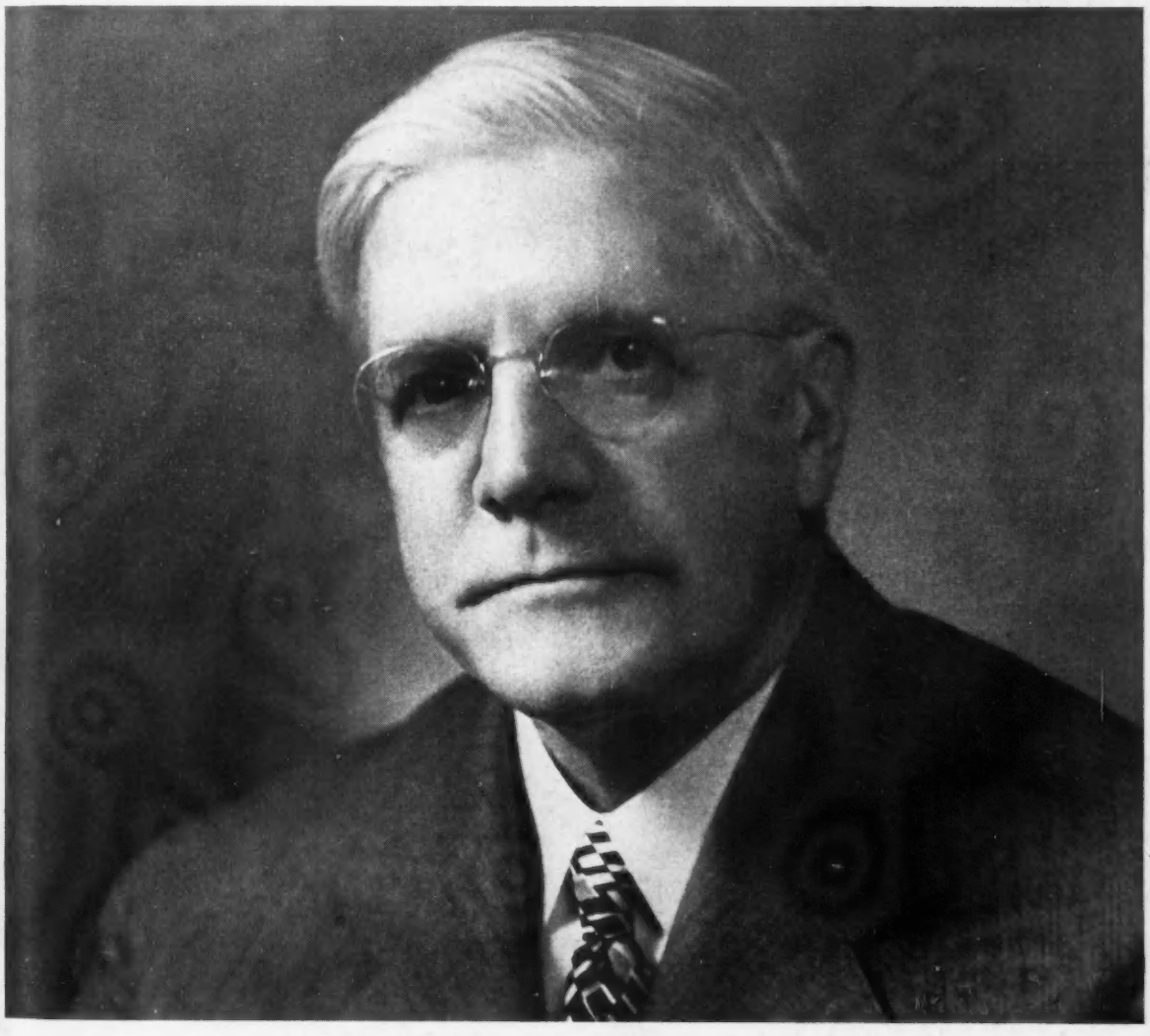
Electrical World

News Issue

SEPTEMBER 6, 1947



Herbert C. Freeman, Newly Elected President of The North American Co

It's a powerful means of building new load now for that day when new load becomes hard to get

Zooming sales of trolley coaches last year quadrupled the prewar yearly average. Six thousand are now in service, and studies show that some 20,000 more are economically justified for transit lines with peak passengers-per-hour capacity of 400 to 2000. Every time one of these electrically powered vehicles is installed in your area, an annual average of 175,000 kw-hrs is added to your power business.

It's a load that takes time to sell, but look how much it's worth!

This big load requires little servicing, and studies show that its maximum demands generally do not coincide with system peaks. It has an annual load factor ranging from 30 to 68, and its power factor at time of maximum demand is 90 per cent or better.

In a city of 250,000 population, annual transit consumption should approximate 36 million kw-hrs. If your transit load falls considerably short of this mark in proportion to the population you serve, years of steady selling, promoting, and organizing may be needed to rebuild the load. But whether you need new load in two years or ten years, transit is *the* big, attractive load to start selling right now. *Apparatus Dept., General Electric Company, Schenectady 5, N. Y.*

HOW CAN YOU GET READY TO CASH IN ON TRANSIT WHEN NEW LOAD IS HARD TO GET?

HERE ARE **4** SUGGESTIONS

1. Seriously consider a transit specialist to study this load in your area.
2. Estimate what your transit load should be. (Electrics are economically justified for lines requiring headways of less than 12 minutes or where peak traffic on a given line is 400 passengers per hour or more past a given point.)
3. Co-operate with your G-E representative in presenting the benefits of electric vehicles to the transit company and the community.
4. See *Lifestream of the City*, the More Power to America movie that shows how electric vehicles reduce traffic congestion and give better service at low cost.

GENERAL ELECTRIC

207-201

NEWS
ELECTRICAL WORLD

ELECTRICAL INDUSTRY'S WEEKLY NEWS REPORT

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The Electrical Week

Speaking before the Pacific Coast general meeting of the American Institute of Electrical Engineers, President Blake D. Hull came out strongly in favor of a new organization for all engineers. The new group would devote its energies to solving the non-technical and welfare problems of the engineer. The Army Engineers have a new formula for selecting cooking equipment for Veterans Hospitals. The formula is being kept secret in an effort to keep the Engineers out of the gas-electric fight. Inside information is that gas is favored. The first atomic power plant may be British. Lacking all fuels for power production, the British are inclined to give power production priority. Five Pacific Northwest utilities have contracted for 335,000 kw of BPA power for the coming year.

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Disregard rumors that Interior Secretary Krug is planning to resign. As things stand now, he will remain in the Cabinet at least until after the 1948 elections. However, he no longer is seriously considered as a candidate for the Democratic vice-presidential nomination.

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Utility Workers Union of America, after weeks of hesitation, wants to comply with the Taft-Hartley Act and do business with the National Labor Relations Board. It will do so if UWU persuades CIO leaders that it must have NLRB aid in organizing and holding a number of key local units.

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Utility bill collections won't be the problem in the next depression that they were in the last one. G. A. Wilson, of New Jersey's Public Service Electric & Gas, told a meeting of utility accountants that unemployment compensation, guaranteed incomes, and lower utility rates all will combine to minimize the uncertainty about ability to pay. Participants in the discussion recognized that utilities are more or less dutybound to provide continuing service, and advocated continuation of liberal collection policies.

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A nasty political fight is brewing over the Congressional investigation of tax exemptions enjoyed by cooperatives (including rural electric co-ops). Democratic strategists are keenly aware that farm co-ops are extremely active in the Mid-West, a Republican stronghold. They hope the current probe will alienate Midwestern farmers, provide a 1948 issue.

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One of the nation's largest power systems recently persuaded several industrial customers to schedule their vacation periods concurrently. As a result, it was able to take 350,000 *kva of generating capacity out of service for maintenance throughout one week.*

Study by a large Mid-West system shows the 1947 load to be on its 1920-1960 trend line. Its war load just offset the slump it met from 1930 to 1935. What its engineers want to know is whether 1950 load will be above or below the trend.

Once more, utilities show interest in developing the remaining hydro in their areas. Much of it, however, is in rather small projects which promise more kwhr than kw. Because capacity is tight, many systems are reluctant to tie up funds without the maximum return in kw.

Next year, the world's national physical labs will switch from "international" to "absolute" units of electricity and light. Instrument makers plan to calibrate and label their meters to conform. The differences are hard to find, but significant.

REA has approved the use of weatherproofed ACSR. An eastern utility okays solid No. 6 aluminum weatherproofed for service wires if No. 8 can not be had. Another system has bought 200,000 feet of bare aluminum for 22- and 26-kv lines.

Dislocation of the timber and pole market has led to some crazy cross-hauling. In one instance, Oregon fir poles were treated in Michigan for use in Pennsylvania.

AIEE President Advocates New Engineering Association

Non-Technical and Welfare Problems of Engineers Would Be Scope of New Group's Activities—AIEE Pacific Coast General Meeting Includes Papers on Utility Problems

FORMATION of an "American Engineering Association" that will be representative of the entire engineering profession was urged last week by Blake D. Hull, president of the American Institute of Electrical Engineers. Nearly 600 members heard his talk before the Pacific Coast general meeting of the Institute at San Diego, Calif.

To set up such an organization, Hull recommended that the major national engineering societies immediately appoint delegates to attend a meeting for the purpose of drawing up a constitution and by-laws. For the success of such an organization it must be made up of individual members similar to the existing national societies, he feels. The purpose of the new group would be to handle the non-technical and welfare problems of the engineer. Existing national societies would retain their present technical activities and prerogatives. On behalf of the AIEE, Hull is seeking the support of all engineering societies in the early consummation of such an organization.

W. C. SMITH, left, AIEE director, and President Blake D. Hull at Pacific Coast General Meeting

Colorado River Power Needed

W. S. Peterson, assistant chief engineer of the Los Angeles Department of Water & Power, made a plea for early development of additional power on the Colorado to meet the rapid load growth in the Pacific Southwest. Power projects must be conservatively developed along the lines of the original Boulder Project to attract Congressional support, he said. Such projects as Bridge Canyon and Glen Canyon, now under discussion, cannot carry an undue amount of unfeasible irrigation. Neither can they stand economically the diversion of water around them. The Bridge Canyon project by itself and without undue support by the Hoover Dam project would be an unfeasible power project. If Bridge Canyon is operated in conjunction with adequate upstream storage such as that afforded by Glen Canyon, and augmented by the future power developments which such storage makes possible, the entire Colorado River development can be successful, he said.

Of particular interest to power engineers was a symposium on distribution system modernization, led by H. E. Jung and R. C. Blankenberg, Southern California Edison Co. They suggested consideration be given to increasing secondary voltages, either to 240-v delta, or 240/416 wye; revising rate structures to cover additional costs of serving low power factor loads; and to secondary banking for greater capacity. They also advocated adopting standard voltage regulations in accordance with actual needs and worth to the customer, allowing increased tolerances for short-time peaks, and greater standardization of equipment. Discussion brought out the necessity for providing sufficient man-hours for substantial research in the vitally important field of distribution.

Original difficulties with thrust bearings on units in the Bonneville power plant were analyzed by F. M. Lewis, superintendent of the plant. A number of wipes on these thrust bearings supporting rotors of unprecedented weight was attributed to a design that may have overstressed ease of installation and maintenance. Subsequent redesign based on field experience resulted in bearings that have given more than 55,000 hours of satisfactory operation since 1941.

Excitation problems in hydroelectric generators were discussed by C. L. Killgore, Bureau of Reclamation. An im-

D. I. CONE, left, Pacific Telephone & Telegraph Co, vice-president from AIEE's Eighth District, poses with C. F. Terrell, Puget Sound Power & Light Co, vice-president from the Ninth District

portant conclusion drawn was that the recently developed excitation system, consisting of a stabilized, self-excited main exciter and a static voltage regulator with a rotating amplifier, apparently offers performance and simplicity. These indicate it may become standard equipment for hydro generators supplying long transmission lines.

Tests and field experience have shown that the high-pressure water stream method of cleaning insulators is practical and more economical than other methods used, said G. Leslie Hill, Pacific Gas & Electric Co. This method presents one of the best opportunities for reducing maintenance cost on transmission and distribution lines. Figures presented indicated a unit washing cost of 14 cents for 76,237 insulators washed on lines of voltages ranging from 12 to 110 kv, representing a saving of more than 50 percent as compared with other methods.

Model of a mechanical derivative-computing servomechanism for power system governing was shown by T. E. Curtis, Pacific Gas & Electric Co. Such a device would continuously compute torque angle, speed, and rate of change of speed.

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Dr. W. E. Wickenden Dies

Dr. William E. Wickenden, president emeritus of the Case Institute of Technology, Cleveland, and past-president of the American Institute of Electrical Engineers, died in a hospital in Peterboro, N. H., on September 1 of a heart attack suffered at his summer home in Jaffrey, N. H., on August 20. He was 64 years old.

Formula for Picking Hospital Cooking Equipment a Secret

Army Engineers Duck Electric-Gas Controversy by Keeping Confidential Details of Method for Estimating Equipment and Fuel Costs for Ranges for Use in Veterans Hospitals

THE Army has adopted new standards for selection of cooking equipment for Veterans Hospitals built by the Corps of Engineers. But electric utilities and equipment manufacturers will have to guess at the conclusions reached in the revised formula. The Engineers tagged it "confidential" and refused to reveal its details to "utility personnel" or to the press.

Adoption of new criteria for estimating equipment and fuel costs for hospital ranges followed a bitter dispute over the old formula used by the Engineers. Electric and gas utilities, as well as makers of equipment using both fuels, assailed the standards originally used by the Engineers as "unrealistic" (ELECTRICAL WORLD, April 19, Page 20).

The Engineers finally agreed to modify this formula. They conducted hearings in June and solicited cost data from interested industrial groups, including Edison Electric Institute and the American Gas Association. Tests also were staged by the Bureau of Standards.

Industry interest in the controversy ran high because of the scope of the Veterans Hospital construction program. Upward of 90 hospitals are to be erected.

Spokesmen for the Chief of Engineers asserted they had advised the industry representatives attending the hearings that details of the new formula would not be revealed.

Engineers Avoiding Strife

One Engineer officer told an ELECTRICAL WORLD representative the Corps wished to avoid the storm of controversy "which followed publication of the old formula."

"There certainly would be protests if details of the new standards were released," he said. "It simply is impossible to please everyone interested in this matter."

Further, this officer added, the formula in itself is by no means as important as some industry people feel that it is.

"The standards, based on the best information we can obtain, were drafted merely to assist our district engineers in the field in fixing equipment and fuel costs, amortization rates, and other charges," he said. "Admittedly costs will vary in different localities. For that reason, the final decision as to which fuel shall be used in a specific hospital will be left to the district engineer in charge."

The same official discounted reports that revision of the criteria would result in increased use of either fuel.

However, a memorandum recently sent to field offices from Washington headquarters of the Engineers lent some credence to rumors that the new standards are more favorable than the old toward use of gas.

Gas Gets Better Break

One paragraph of this document notes that "the revised equipment cost estimates showed that gas appliances were markedly less expensive in the smaller sized hospitals and a little cheaper in the cases of hospitals of 500 beds or more for which gas reel ovens are specified. Before this revision gas was at a great disadvantage in the larger hospitals in this respect."

The memorandum also reveals that "the new unit gas consumption becomes 3,340 Btu per ration." The electric unit was not revealed, the memorandum adds, but "the oral claim made by the Edison Electric Institute . . . was 500 watthours per ration (1,706 btu.)

"If this figure is correct, the energy ratio shown (in the old formula), which was approximately 1.6, has now been raised to 1.95. At first glance, this would seem highly disadvantageous to gas, since it had the effect of raising the relative cost of gas 21 percent, but in actual practice the result is less marked. . .

"The reduced electric unit figure lowers the estimated number of kilowatthours required. This changes the relation between commodity and demand, and may result in a higher average electric rate. A second factor which offsets the less favorable energy ratio is the correction of the estimated installation costs. The corrected cost figures include necessary electric equipment previously omitted and reflect the marked increase in electric appliance

prices, thus raising amortization and interest items in the total estimated cost of a new kitchen."

The memorandum also condemns "electric interests" for the controversy over the old formula, though Engineer officers told ELECTRICAL WORLD that both "electric and gas groups" complained of the former standards.

The memorandum says that the Engineers were put under "pressure from members of Congress" because of "letters from electric interests."

As a result, it added, "letters were sent to the top command of the Corps of Engineers from Congress containing data and claims for the superiority of electric cooking and objections to the use of gas. There is no means of telling whether the now revised method will put an end to such efforts to secure preferred consideration for electricity."

District Engineers were instructed to revise hospital plans in the light of the new formula before the end of August, the memorandum said.

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Hogg Begins Investigation of Manitoba Hydro Assets

Dr. Thomas H. Hogg, former chairman of the Hydro-Electric Power Commission of Ontario, has taken up his duties as head of a commission which is to study the hydroelectric power situation in Manitoba.

He is the only member of the commission and is also consulting engineer for the Manitoba Department of Mines and Natural Resources.

His first study will be of the present and planned installations of the Winnipeg-Electro System and of the Winnipeg Electric Co. Dr. Hogg will give his opinion on whether or not these are adequate to meet Manitoba's hydro power needs.

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2 Injured by Explosion at Boonville, Ind., Plant

Two employees of the Boonville (Ind.) Light & Power plant were injured on the evening of August 28 when No. 3 boiler exploded. The explosion, still unexplained, drove the boiler through a brick wall and landed it in a vacant lot. The city was without power for several days as linemen of Southern Indiana Gas & Electric Co completed a tie-line.

The 550-lb pressure boiler was second hand when it was installed 24 years ago. The brick building was about 50 years old. The plant was bought from the Southern Gas in 1941 for $310,000.

May Electric Energy Sales Advanced 16.9 Percent

Sales of electric energy to ultimate customers in May, 1947, totaled 17,610,274,000 kwhr, compared with 15,064,489,000 kwhr in May, 1946, an increase of 16.9 percent, the Edison Electric Institute reports.

Classification of Sales, May, 1947, and Change from 1946

Kilowatt-Hour Sales May	Million Kwhr. 1947	1946	% Change
Residential or domestic...	3,437	2,994	+14.8
Rural (Distinct rural rates)	514	379	+35.8
Commercial or industrial			
Small light & power....	2,994	2,578	+16.2
Large light & power....	9,375	7,869	+19.1
Street & highway lighting.	165	160	+ 3.1
Other public authorities..	475	463	+ 2.7
Railways & railroads			
Street & interurban....	380	369	+ 3.0
Electrified steam railroads	224	201	+11.2
Interdepartmental	46	51	—10.5
Total to ult. customers..	17,610	15,064	+16.9

Revenues from ultimate customers amounted to $310,024,600 in May, compared with $275,606,100 in May, 1946, an increase of 12.5 percent.

For the twelve months ended May 31, 1947, the average use per customer advanced to 1,377 kwhr from 1,283 kwhr for the preceding year, an increase of 7.3 percent; the average annual bill to $43.38 from $42.60, an increase of 1.8 percent; revenue per kwhr dropped to 3.15 cents from 3.32 cents, a decrease of 5.1 percent.

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Street Lighting Program Announced by Atlanta, Ga.

One of the most far-reaching street lighting projects ever undertaken in the South will be started soon by the Georgia Power Co in coordination with city engineers of Atlanta. There are three phases of the project.

The first calls for relighting 19 main traffic arteries with 1,225 units of 10,000 lumens, IES Type 3. These will be mounted on 8-ft upsweep brackets and will replace 283 obsolete, 2,500-lumen, radial bowl reflectors.

The second phase calls for a five-year program involving 4,000 units of 6,000 lumens, IES Type 1. These overhead lights will be span hung in suburban areas. It is planned to install 500 each year.

The third phase is to be an experiment with mercury vapor lighting. One block on each of two streets is to be used to obtain public reaction. In the one block, 400-watt, 16,000-lumen lamps will be used in Form 81 luminaires with light alabaster glass. In the other, 400-watt, 20,000-lumen lamps will be used in OV-20 high-angle refractor luminaires. In both cases, there will be eight lights to the block. If the experimental lighting meets with public approval, 2,200 such lights would be installed.

Cost of the first phase will be $150,000 and of the five-year plan, $500,000.

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FPC Denies Idaho Power 50-Year License for Project

A request of the Idaho Power Co for a new 50-year license for redevelopment of its hydroelectric project on the Snake River near Hagerman has been denied by the Federal Power Commission, which pointed out that the project was already licensed.

The company argued that acceptance of an amendment of the old license, granted in 1928, would in effect be an acceptance of a 23-year license for a new plant. It had originally intended only to install additional generating units at the site, it said, but later decided to remove all existing equipment and construct a new powerhouse.

The commission determined that since the redevelopment is merely an enlargement of the project presently covered by the license, it would not be in harmony with the intent of the Federal Power Act to issue a new license.

C. J. Strike, president of Idaho Power, said that the FPC decision will not interfere with the company's 60,000-kw development there.

Construction crews are now excavating the site of the new powerhouse and the first two units of 15,000 kw each will be in service by summer of next year. The other two units will be ready for operation in 1949.

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Memphis City Light Plans Purchase of 2.4-Kv System

Memphis Light, Gas & Water Division plans to purchase from the Cordova Industrial Development Co a 2.4-kv distribution system. Commissioners of Memphis Light have approved an $8,000 purchase price. Completion of the purchase awaits approval by the City Commission.

The system was originally owned by the National Fireworks Co. During the war, the company purchased power wholesale from Memphis Light and distributed it to various buildings in the plant. The Cordova firm has since bought the plant and wishes to lease the buildings to various firms. It has no desire to distribute power.

Britain May Get First Electric Power from Nuclear Fission

Completes First Atomic Pile This Month—Shortage of Fuel May Lead to Exploitation of Atomic Power—Weapons Given Priority in United States—British Get No Help from U.S.

COMPLETION this month of the first atomic pile in Great Britain is raising speculation in Washington that Britain may be getting industrial energy from nuclear fission before this country.

Shortage of coal is generally recognized as the key to most of Britain's economic difficulties. So, since few alternate sources of power are available domestically, the British attach great importance to exploitation of atomic power. In this country, on the other hand, power generation has a low priority as compared with weapon production and development.

British atomic appropriations of about $120,000,000, therefore, may bulk larger than the portion of this country's atom budget—$500,000,000 a year—which is devoted to power work. Most atom experts—though by no means all—believe that production of usable atomic power within the next five years or so is simply a matter of allocating sufficient money and manpower to the job.

No Help from United States

British atomic research presumably is proceeding without help from the United States. Interchange of information on peaceful applications of atom-splitting is specifically forbidden by the McMahon Atomic Energy Act. However, during the war Britain had an atomic bomb program which was later absorbed in the Manhattan Project. And several British scientists worked on the U. S. bomb program.

The atomic pile which went into operation in mid-August at Harwell is a low-power (perhaps a few watts) apparatus using a carbon moderator. This pile is known as GLEEP—graphite low energy experimental pile. It is probably similar to the first pile built in 1942 at Chicago and still operating there. The Harwell pile will be used for research on pile characteristics and perhaps for manufacture of radioactive isotopes.

A second, high-powered pile is scheduled for completion next year at Harwell. This may be comparable to the experimental pile at Oak Ridge which produces the present U. S. supply of radio-isotopes.

Third stage in the British program is construction of a high-temperature pile at Drigg, capable of producing some 75,000 kw of usable power. Reportedly, this is to be a carbon-moderated pile using helium as a heat transfer medium.

Britain is the second country outside the U. S. to have an operating pile. Canada has had a low-energy pile, using heavy water moderator, in operation at Chalk River for some time. It produces plutonium in minute quantities for experimental purposes. A larger pile, for production of radio-isotopes, is believed to have been completed this year.

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$12,000,000 Construction Planned by Hartford Utility

Hartford Electric Light Co. has announced a $12,000,000, three-year construction program including the addition of a 45,000-kw. steam generating unit before 1950.

Work has already begun on the replacement and rebuilding of the mercury turbine generating unit at South Meadow station, to be in service in 1948, and improvement in another turbo-generating unit at this station is also under way. This generating station expansion will give the company an approximate increase of 25 percent in capacity by 1950.

The program also includes additions to the company's distribution system, its Sheldon Street service building and garage, several substations, and related parts of plant and facilities.

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Opens Research Office

Research and development headquarters of the Copper Wire Engineering Association have been opened at 20 North Wacker Drive, Chicago, by Frank E. Sanford, the association's recently appointed director of research (ELECTRICAL WORLD, July 12, Page 27.) Sanford has announced that the testing and research program would begin immediately, using educational institution and commercial laboratories.

Oregon Act Drives Snake River Project Into Idaho

Idaho Power Co has abandoned its plans for a major hydroelectric project on the Snake River in eastern Oregon. Instead, the company has selected a new site on the Snake in Idaho.

By applying to the Federal Power Commission for a license for the new project last week, the utility apparently bypassed a lengthy political and legal controversy. This battle developed shortly after the company began planning a hydro plant on the Snake at Oxbow, in Oregon and Idaho. The power plant would have been located in Oregon.

These plans were drawn up at the request of residents of the area, who complained that a critical power shortage was developing in eastern Oregon. The company delayed consideration of the Oxbow project because of provisions of the Oregon Hydroelectric Act of 1931, one of which would have permitted the state to take over a state-licensed project at any time upon two years' notice.

The act was amended by the Legislature last summer, eliminating this and other sections, only to be vetoed by the governor. Though the amendments were passed again over the veto, the issue aroused considerable debate; and a referendum was called on the revisions. Since the next election in which the referendum can be submitted to the public will not be held until fall of 1948, the company decided to abandon the project. Company officials asserted that it was "highly improbable" that the licensing "difficulties" with Oregon could be terminated and the Oxbow project completed in time to meet the area's power shortage.

The new project will be located near Bliss, Idaho. The company's application for a federal license made it clear that the new location fell short of the power development potentialities of the Oxbow site. Total installed capacity of the Bliss plant will be 100,000 kw, with sufficient head to develop 75,000 hp for approximately 90 percent of the time, the company estimated. The Oxbow plant would have had an installed capacity of 188,000 hp.

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Utility Gets Franchise

Basile, La., has granted the Gulf Public Service Co, New Iberia, a 25-year franchise to replace one which still had over three years to run. The town will receive 2 percent of the gross residential and commercial revenues collected in the town.

Changes in Capacity Reported to Federal Power Commission

Plant Additions During June

Utility	Plant	Fuel	Capacity (kw)
Woodsville Water & Light Dept	Woodsville, N. H.	H	400
Border Counties Power Co-op	Warroad, Minn.	IC	1,990
Central Electric Federated Co-op Assn	Galbraith, Iowa	IC	1,000
Coggon Municipal Light Dept	Coggon, Iowa	IC	164
Bloomfield Municipal Light Dept	Bloomfield, Iowa	IC	300
Milan Light & Water Dept	Milan, Mo.	IC	500
Chappell Municipal Utilities	Chappell, Neb.	IC	473
Wauneta Light & Power Co	Wauneta, Neb.	IC	77
Ellis Municipal Electric Light Dept	Ellis, Kan.	IC	564
Virginia Electric & Power Co	Nags Head	IC	100
Florida Power Corp	Inglis	S	25,000
Clarksdale Water & Light Dept	Clarksdale, Miss.	S	3,500
Oklahoma Gas & Electric Co	Horseshoe Lake	S	10,000
Denton Water & Light Dept	Denton, Tex.	IC	1,000
Community Public Service Co	Pecos, Tex.	IC	1,750
Western Colorado Power Co	Oliver	S	2,000
Community Public Service Co	Ruidoso, N. M.	IC	400
Kit Carson Electric Co-op	Taos, N. M.	IC	300

Plant Retirements During June

New York State Electric & Gas Corp	Center Village	H	250
Pennsylvania Electric Co	Brookville	IC	396
Pennsylvania Electric Co	Barnesboro	S	2,000
Cherryland Rural Electric Co-op	Thompsonville, Mich.	H	120
Cherryland Rural Electric Co-op	Thompsonville, Mich.	IC	60
Dairyland Power Cooperative	Rushford, Minn.	H	250
Bloomfield Municipal Light	Bloomfield, Iowa	IC	240
Northwestern Light & Power Co	Peterson, Iowa	IC	1,960
Union Electric Co. of Missouri	Ashley St, St. Louis	S	12,000
Chappell Municipal Utilities	Chappell, Neb.	IC	136
Wagoner Light, Power & Water Dept	Wagoner, Okla.	IC	840
Community Public Service Co	Ruidoso, N. M.	IC	30
Southern California Edison Co	Santa Ana River No. 3	H	1,500

H—Hydro; IC—Internal Combustion; S—Steam

BC Electric Railway Co Changes Dealer Aid Plan

The British Columbia Electric Railway Co has made changes in its post-war dealer plan. The $3 per unit paid as a bonus on sales of ranges and automatic water heaters has been discontinued. In the future, dealers will receive an advertising allowance of a half of 1 percent of reported sales volume on appliances. However, radios and record players will be deducted from this total.

The utility feels that money formerly paid out in bonuses can be used to assist dealers in other ways more beneficial to the industry. Since the war ended, BC Electric has offered retailers a number of services. These include the services of a display and of an appliance repair consultant. It has also made available a sales training course.

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Ontario to Build Project

Ontario Hydro-Electric Power Commission will begin immediate construction of a 160,000-hp development at the Chenaux Rapids on the Ottawa River, 10 miles north of Renfrew. A dam, 60 ft high and 3,000 ft long, will be erected. All of the power generated will be available for use in Ontario. Whenever power is needed in Quebec province, half of the power will be made available for use in that province. Quebec at that time will assume half of the cost of the project. Construction of the project will be under the direction of Ontario Hydro officials. They will consult with Quebec authorities.

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Texas Bars High Tension Lines along State Roads

High tension power lines will be prohibited along the rights-of-way of state highways in Texas under a policy outlined recently by the Texas Highway Commission.

Under the policy lines can be erected to serve customers along the right-of-way, but the commission does not consider it good public policy "to permit the right-of-way to be used for the general long-distance transmission of power."

All lines which are permitted along highway rights-of-way must not interfere with the use, maintenance, or improvement of the highway. They must also be placed in the position assigned by the state highway engineer.

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Sells Coke Business

Central New York Power Corp has sold its wholesale and retail coke business to the United Eastern Coal Sales Corp.

Florida P & L Pushes Oil Heating to Even Out Load

Electricity for house heating is not at all satisfactory in south Florida, where the cold snaps are not so severe and so frequent as elsewhere. This is the idea that Florida Power & Light Co is trying to sell its customers. The utility wants them to use oil or gas heaters.

This unusual sales promotion campaign by an electric utility is designed to level out, or eliminate to a great extent, the sudden demand for power when Florida's usually warm weather turns cold. Last winter, colder than usual, caused the utility considerable loss. Customers, most of whom have no central heating system, sought to warm their homes by using electric space heaters, toasters, hot plates, irons, and other appliances with a heating unit. The result was that transformers all over the system popped. The oil and gas space heater campaign is intended to avert such trouble next winter.

The company figures that there is an average of 77 chilly days annually in south Florida. About 566 hours of heating are necessary to stay comfortable. To do this by electricity is seven times as expensive as by oil heating. To serve this electric load would require seven times the present generating and distribution equipment. About 95 percent of the time this investment would be idle.

For its campaign, the utility has prepared a 16-page booklet, breezily written and profusely illustrated. Some 1,700 business men in Dade and Broward Counties have been invited to participate in oil heater sales conferences, and 75 manufacturers have been requested to increase sales quota to the area.

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15-Year Franchise Granted

Citizens Light & Power Co has been granted a 15-year franchise by Tuckerman, Ark. The company has started rebuilding its system in the city and is removing its poles and lines from streets to alleys.

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Utility Finances Research

A research project to study and develop new and improved drainage methods for Utah's irrigated lands has been made possible by a $10,000 grant from the Utah Power & Light Co, President Franklin S. Harris of the Utah State Agricultural College has announced.

Cyclone Burners Made Chicago Utility Standard

Commonwealth Edison Co Claims New Equipment Means Savings in Original and Operating Costs

Commonwealth Edison Co, Chicago, has announced that it will make standard on all additions to generating capacity a new type of furnace known as the cyclone burner.

An experimental cyclone burner was installed in the Calumet station in 1943. Another is to be placed in the Fisk station, which is to go into operation in 1949.

The burner is the result of years of research by the Babcock & Wilcox Co, boiler manufacturers; Sargent & Lundy, consulting engineers; and Commonwealth Edison. The extremely efficient and compact equipment gets its name from the cyclonic manner in which coal is blown and circulated inside the burning chamber. The new burner supplants former methods of burning coal on a chain grate or in pulverized form.

The cyclone furnace is designed to burn coal such as is mined in Central Illinois, the company's chief source of supply.

Advantages of the furnace are these:

1. Between 80 and 85 percent of the coal ash is collected in the furnace itself and removed in molten form. This materially simplifies ash handling and substantially reduces the emission of dust through the stacks.

2. Retention of most of the ash in the furnace sharply reduces the amount of boiler tube cleaning. It also permits closer spacing of boiler tubes and thus contributes to greater compactness.

3. The cyclone furnace makes unnecessary costly precipitator equipment to remove fly ash.

4. Simple, easily maintained coal crushing equipment may be used instead of expensive pulverizers.

Velocity, 300 Miles an Hour

The cyclone burner at Calumet station is a horizontal cylindrical chamber, 8 ft in diameter and 11 ft long. Closed at one end except for coal and air inlets, it has a restricted discharge opening at the other end. Coal crushed to ¼ in. is introduced into the compartment with air at a velocity of about 300 miles an hour. This gives the mixture a cyclonic motion and results in split-second burning.

Two boilers will supply the steam driving the new Fisk, 150,000-kw generating unit. Each will be fired by four cyclone burners, and each will be capable of producing 750,000 lb of steam an hour.

ON THIS SITE, Cambridge (Mass.) Electric Light Co will erect an 18,000-kw steam generating plant. The new plant will be along the Lechmere Canal at its outlet into the Charles River basin. Thompson & Starrett Co, New York, is doing the general contract work; Gilbert Associates, Reading, Pa., are consultants; and New England Gas & Electric Service Co, Cambridge, engineers

Engineers Continue Work on High Dam at Ft. Randall

Lt Gen Raymond A. Wheeler, Chief of Engineers, last week ordered continuation of construction on Fort Randall reservoir, the Army's huge multiple-purpose project on the Missouri River in South Dakota. The Army thus rejected a Congressional proposal that a less pretentious dam be erected at the site in the interest of economy.

General Wheeler announced that the Engineers had completed a resurvey of the entire development and found that the loss of power, irrigation, navigation, and flood control benefits involved in the suggested scaling down of the project far outweighed the savings in construction costs.

Original plans of the Engineers, under which they are now proceeding, called for an earth dam 160 ft high. Last summer Congressman Francis Case, South Dakota Republican, suggested to fellow members of the House Appropriations Committee that considerable cost might be avoided by erecting a 40-ft, concrete reservoir. The committee thereupon directed the Engineers to restudy the project.

The lower dam would result in substantial reduction of Fort Randall's power output, the Engineers reported. Such a structure could develop no more than 80,000 kw, they said. Initial capacity of the power plant at the high structure will be 160,000 kw, ultimately to be increased to 320,000 kw.

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Sho-Me No Longer Co-op

Reorganization of the Sho-Me Power Cooperative as a private utility has been approved by the Missouri Supreme Court. The court previously had ordered the co-op to reconstitute itself as a private utility after it had been found guilty of violating its franchise by serving non-members.

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Co-op Buys Municipal

Citizens of Capitan, N. M., have voted to sell their municipal power plant to the Otero County Electric Cooperative, Cloudcroft. The co-op will supply the town from its Alamogordo plant but will retain the Capitan plant as a reserve.

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Utilities Bills Taxed More

A 10 percent utility tax on water, gas, and electricity bills has been approved by the DeLand, Fla., city commission. The new tax goes into effect October 1. Previous tax was 6 percent.

SEC RULINGS

American & Foreign Power Co, Inc, has been granted exemption from competitive bidding rule in proposed sale of $35,000,000 sinking fund debentures 3½, due in 1968. Sale, which would be arranged privately, would provide funds for retirement of outstanding debentures and is conditioned upon commission approval of reorganization plan. (Release No. 7618).

Philadelphia Co's motion for a rehearing and oral argument on its request for additional time within which to file briefs in the commission's "death sentence" proceedings against the company has been denied. (Release No. 7623).

Provincetown Light & Power Co's proposal to issue and sell unsecured notes payable not exceeding $125,000 to the First National Bank of Boston has been approved. The notes would mature not later than December 31, 1952, and would bear interest at not exceeding 3 percent. (Release No. 7651).

Public Service Co of Indiana, Inc, has been authorized to sell under competitive bidding conditions, such of its $11,077,800 issue of 2¾ percent convertible debentures, due May 1, 1962, as are not purchased under subscription warrants by common stockholders. The commission also authorized shortening to five days of the usual ten-day period for submission of bids. (Release No. 7652).

North American Co's proposal to distribute, in partial liquidation, to its stockholders five shares of common stock of its subsidiary, the Wisconsin Electric Power Co, for each 100 shares of North American common held by them has been approved. The stock would be distributed on October 15 to stockholders of record on September 12 and North American proposes to pay cash, at the rate of $20 a share, to such of its own stockholders as would be entitled to less than a full share of Wisconsin Electric common. (Release No. 7654).

North American Light & Power Co has received permission to acquire 710,500 shares of the new $10 par value common stock of its subsidiary, the Northern Natural Gas Co, in exchange for 355,250 shares of the presently outstanding stock, $20 par value, of Northern owned by Light & Power. (Release No. 7655).

Commonwealth & Southern Corp has been authorized to pay a dividend of $3 a share on an aggregate of $4,323,741 of outstanding preferred shares. Dividend will be paid October 1 to stockholders of record September 10. (Release No. 7657).

Middle West Corp's proposal to sell to the Bankers Trust Co of New York 49,720 shares of $5 par value common stock of the Central & South West Corp for $10 a share has been approved. The Bankers Trust would purchase the shares as agent for certain clients. Middle West proposes to use the proceeds to buy 49,720 shares of the $10 par value common stock of its subsidiary, the Kentucky Utilities Co. (Release No. 7661).

Plymouth County Electric Co has been authorized to issue and sell to its parent, New England Gas & Electric Association, 1,800 additional shares of its $25 par common stock for $35 a share. Plymouth also received permission to borrow not more than $700,000 from the first National Bank of Boston. The money from the stock sale will be used to partially pay Plymouth's floating indebtedness and the bank loan will be used for property improvements. (Release No. 7671).

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No Dividends This Year

There will be no dividend checks this fall for electric customers of the Board of Public Utilities of Jamestown, N. Y. The board voted to use the money for system expansion. Dividends have been paid annually since 1939.

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New Oklahoma Unit

The Public Service Co of Oklahoma has put into operation a 43,000-hp unit at its Tulsa power plant. The new unit can use coal, gas, or oil for fuel.

Asks to Remove Plant

California-Oregon Power Co has applied to the California Public Utilities Commission for permission to remove its Shasta River hydroelectric plant in Siskiyou County. The company explained that it has been unable to generate power at the plant except in winter because so much water was being diverted for irrigation. It has been used as a standby for Yreka and vicinity but is no longer necessary. The firm said it wanted to sell land and buildings, removing the equipment to its Oketee plant on the North Umpqua River in southern Oregon.

•

Co-op Limits Customers

The Southern Indiana Rural Electric Cooperative, Tell City, Ind., will accept no more applications for service until power conditions improve. It is believed that it will be six months until Southern Indiana Gas & Electric Co can erect another line to supply additional power.

MEETINGS

Wisconsin Utilities Association—Accounting Section, Dell View Hotel, Lake Delton, Wis., September 25-26. A. F. Herwig, executive secretary, 135 West Wells St., Milwaukee 3, Wis.

National Electrical Manufacturers Association—Annual Meeting, Hotel Traymore, Atlantic City, October 27-31. W. J. Donald, managing director, 155 East 44th St., New York 17, N. Y.

Previously Listed

Edison Electric Institute—Accident Prevention Committee, EEI, 420 Lexington Ave, New York, September 8-9; Meter and Service Committee, joint meeting with Meter and Service Methods Committee of the Association of Edison Illuminating Companies, Lord Baltimore Hotel Baltimore, September 22-24; Purchasing and Stores Committee, Henry Grady Hotel, Atlanta, Ga., September 29-October 1; Prime Movers Committee, Benjamin Franklin Hotel, Philadelphia, October 6-7; Electrical Equipment Committee, Benjamin Franklin Hotel, Philadelphia, October 6-7; Transmission & Distribution Committee, Benjamin Franklin Hotel, Philadelphia, October 9-10.

National Electrical Contractors Association—Annual Meeting. Palace Hotel, San Francisco, September 8-10.

Instrument Society of America—Second Annual Conference and Exhibit, Stevens Hotel, Chicago, September 8-12.

Illuminating Engineering Society—Technical Conference, Roosevelt Hotel, New Orleans, September 15-19.

Indiana Electric Association—Annual Convention, French Lick Springs Hotel, French Lick, Ind., September 17-19.

International Association of Electrical Inspectors—Northwestern Section, Eugene Hotel Eugene, Ore., September 22-24; Southwestern Section, Mission Inn, Riverside, Calif., September 29-October 1; Western Section, Mount Royal Hotel, Montreal, Canada, October 13-15; Eastern Section, Seaside Hotel, Atlantic City, October 20-22; Southern Section, George Washington Hotel, Jacksonville, Fla., October 27-29.

Association of Iron and Steel Engineers—Annual meeting, William Penn Hotel, Pittsburgh, September 22-25.

Pennsylvania Electric Association—Annual meeting, Benjamin Franklin Hotel, Philadelphia, September 23-24; Transmission & Distribution Committee, Fort Ligonier Hotel, Ligonier, Pa., October 16-17; Prime Movers Committee, Benjamin Franklin Hotel, Philadelphia, October 23-24.

American Institute of Electrical Engineers—Middle Eastern District Meeting, Biltmore Hotel, Dayton, Ohio, September 23-25; Midwest General Meeting, Congress Hotel, Chicago, November 3-7.

National Research Council—Conference on Electrical Insulation, Massachusetts Institute of Technology, Cambridge, Mass., September 24-27.

Southeastern Electric Exchange—Engineering and Operation Section, Henry Grady Hotel, Atlanta, September 25-26; Sales Conference, Biltmore Hotel, Atlanta, October 29-31.

Interstate Power Club of New York—Fall Meeting, Hotel Martinique, New York, September 29.

Fluorescent Lighting Association—First Annual Cold Cathode Fluorescent Lighting Exhibit, Commodore Hotel, New York, October 7-9.

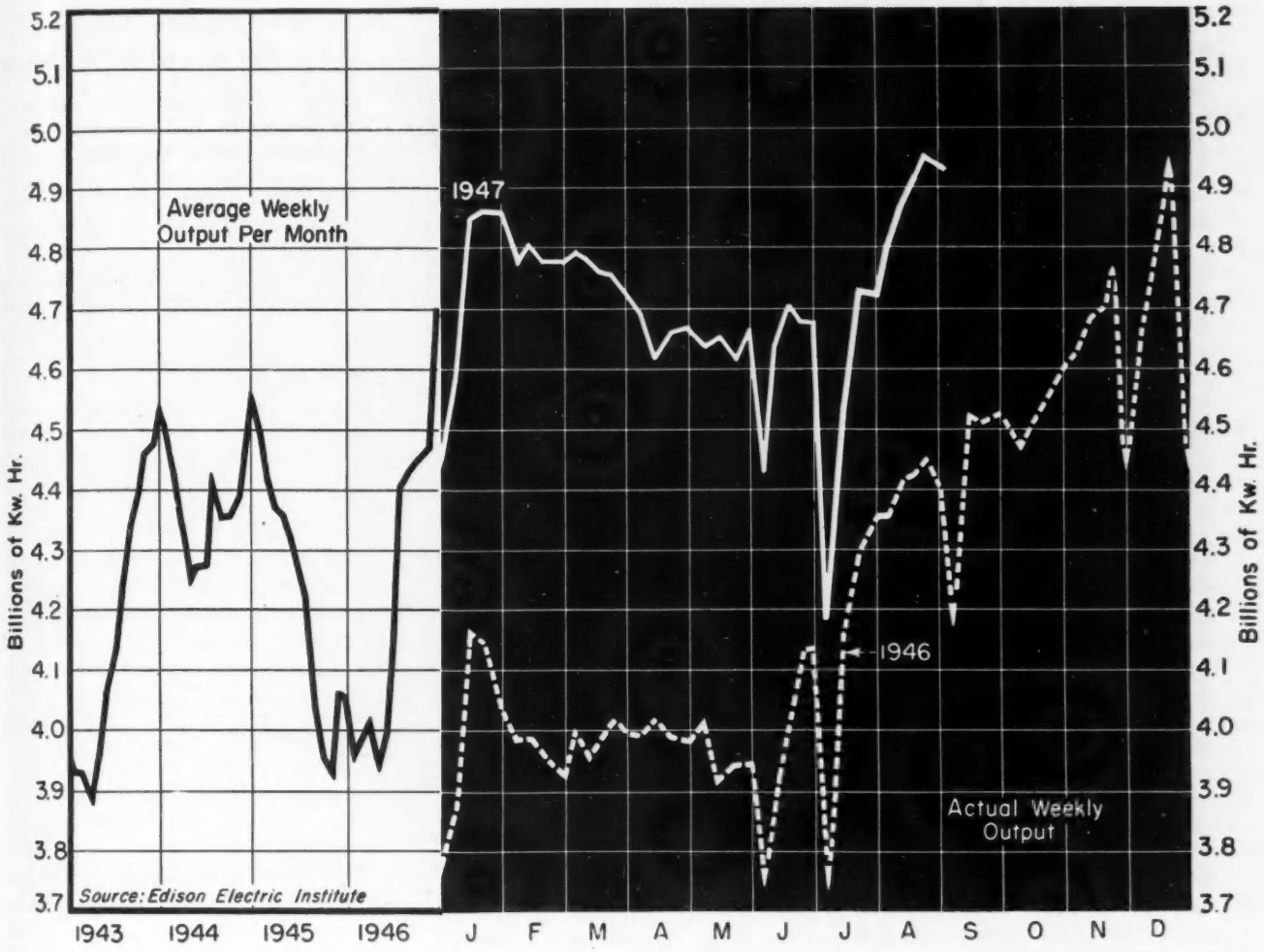
National Farm Electrification Conference—Claypool Hotel, Indianapolis, October 7-8.

International Association of Electrical Leagues—Annual Conference, Statler Hotel, St. Louis, October 8-11.

Electrochemical Society—Fall Congress, Copley-Plaza Hotel, Boston, October 15-18.

Missouri Valley Electric Association—Accounting Conference, President Hotel, Kansas City, Mo., October 16-17; Rural Roundtable, Skirvin Hotel, Oklahoma City, Okla., October 30; Sales and Rural Conference, Skirvin Hotel, Oklahoma City, Okla., October 31-November 1.

American Standards Association—Annual Meeting, Waldorf-Astoria Hotel, New York, October 21-23.



State High Court Refuses to Reconsider Skagit Ruling

Following refusal of the Washington Supreme Court to reconsider its decision declaring illegal the proposed purchase of the Puget Sound Power & Light Co by the Skagit County Public Utility District, Western Washington PUD's have launched a three-point program to acquire the private company's system.

"The deal is still on with the Puget Sound Power & Light Co, as far as the PUD's are concerned," Alex Stewart, managing director of the State PUD Association, said after a meeting of 35 commissioners in Seattle.

The PUD's, Stewart said, will put into immediate motion their plan to acquire the company's holdings. Details of the plan were not disclosed. In addition, the PUD's will support demands that BPA appropriations be restored at the next session of Congress and will demand through the state's Congressional bloc that a hearing be held into the Northwest's power situation when three members of a House appropriations subcommittee tour the area in September.

The court's refusal to reconsider its decision ends a case instituted more than a year ago to test validity of the proposed issue through which the purchase by the Skagit PUD, on behalf of itself and 14 other PUD's, was to be financed.

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BPA Reduces Staff

Bonneville Power Administration has released 616 employees because of budget reductions. Most of those released worked in the Portland area. Annual employees were reduced from 1,393 to 851, a decrease of 542. Hourly employees were reduced from 674 to 600, a decrease of 74. All administrative offices and divisions were affected. The entire 54 employees in the division of industrial resources and development were released.

•

Rutland, Vt., Sues Utility

Rutland, Vt., has sued the Public Service Corp of Vermont for $1,200,000 for damage to city property during the floods in early June when a power dam failed. The utility in defense claims the floods were "an act of God."

Electric Output Dips

The electric output curve moved slightly downward during the week ended August 30, 1947, according to figures released by The Edison Electric Institute. The amount of electrical energy distributed by the light and power companies of the country was 4,939,801,000 kwhr, comparing with 4,952,876,000 kwhr during the preceding week, which was the highest point ever recorded. During the week ended August 31, 1946, the total was 4,404,192,000 kwhr, this year's figure representing an increase of 12.2 percent.

Weekly Output, Millions Kwhr

1947		1946		1945	
Aug. 30	4,940	Aug. 31	4,404	Sept. 1	4,137
Aug. 23	4,953	Aug. 24	4,444	Aug. 25	4,116
Aug. 16	4,923	Aug. 17	4,422	Aug. 18	3,939
Aug. 9	4,874	Aug. 10	4,412	Aug. 11	4,395
Aug. 2	4,806	Aug. 3	4,351	Aug. 4	4,432
July 26	4,730	July 27	4,352	July 28	4,435
July 19	4,372	July 20	4,293	July 21	4,385
July 12	4,531	July 13	4,156	July 14	4,295
July 5	4,190	July 6	3,741	July 7	3,978
June 28	4,675	June 29	4,133	June 30	4,353

Percent Change from Previous Year

	Aug. 30	Aug. 23	Aug. 16
New England	+ 7.2	+ 5.0	+ 4.8
Mid-Atlantic	+10.8	+ 8.5	+ 9.1
Central Industrial	+13.8	+13.5	+12.5
West Central	+14.8	+15.8	+14.4
Southern States	+11.1	+10.2	+10.2
Rocky Mountain	+18.7	+15.4	+14.1
Pacific Coast	+11.5	+12.6	+13.9
Total United States	+12.2	+11.4	+11.3

Washington Water Power to Spend $3,000,000 Yearly

Washington Water Power Co probably will spend about $3,000,000 a year for the next five years on construction in Washington and Idaho, J. E. E. Royer, vice-president, has announced.

"In our planned construction, much is dependent upon availability of materials and manpower," Royer said. "Increased prices this year forced upward our estimated figure and lack of some materials will cause a carry-over of part of the program to next year."

The company early this year had outlined a near $3,000,000 construction program for its territory in Washington and Idaho. That 1947 figure is now about $3,500,000. This construction program is about 60 percent complete. A major item of expense under this year's program has been the rebuilding of the distribution system to increase capacity at a cost of about $1,000,000.

Of an allotted $670,000 for new transformers and meters, $378,000 has been used. For street lighting, $127,000 is being expended. Another $500,000 is being used for the building of new substations and the improvement of others, and $650,000 for new extensions. Increasing the voltage-carrying capacity of transmission lines has called for another $350,000, and about $500,000 is being spent to improve technical voltage conditions over the system.

Of the five-year program, nearly half, or $7,000,000 is earmarked for Spokane. About $3,700,000 will be used for improvements in the transmission and distribution system, $1,750,000 for substations and substation improvements, $650,000 for street lighting modernization, and $800,000 for general improvements of service buildings and other miscellaneous items.

•

Oregon Agriculture Group Plans Research Program

Reelecting its officers and board of directors for another year, the Agricultural Engineering Research Foundation at a recent meeting laid plans for another year of investigation of the economic use of electricity on the farm.

The Foundation is the offshoot of the Committee on Relation of Electricity to Agriculture for Oregon. It is supported by electric utilities and farm equipment manufacturers. Research is carried on under the direction of the staff of the School of Agriculture and the Experiment Station at Oregon State College.

Among projects for study this coming year are barn hay curing, garden pea shelling, drying and storage of gladiolus bulbs, farm freezer tests, drying of pea vines at canneries with infrared light, developments in sprinkler irrigation, and control of litter moisture in poultry houses.

Officers are Roy V. Stockton, farmer, president; W. A. Schoenfeld, dean of the School of Agriculture, vice-president; R. S. Besse, assistant dean of the Experiment Station, secretary; and Berkeley Snow, Northwest Electric Light & Power Association, treasurer.

•

Hydroelectric Plant Will Be Built on Saranac River

The Great Gorge at High Falls on the Saranac River in northern New York, long noted as a scenic attraction, is to be the site of a new hydro plant. Eastern New York Power Corp will spend $1,400,000 for a dam, powerhouse, and power generating equipment.

A concrete dam, 65 ft high, will back up the river for about two miles. The powerhouse will contain two 5,700-hp turbines connected with two 4,000-kw generators. Provision will be made to add a third unit later. The new development will be connected with three hydro plants at Cadyville.

The utility supplies an estimated 75 percent of the electricity used in Clinton County. The company wholesales its output to the Republic Steel Corp at Lyon Mountain and the City of Plattsburg. It also furnishes some power to the New York State Electric & Gas Corp and to the Paul Smith's Electric Light, Power & Railroad Co.

•

Carter Acting Chairman

Jerry W. Carter has been named acting chairman of the Florida Railroad and Public Utilities Commission in a reorganization following the death of W. B. Douglass, former chairman. Carter has been a member of the commission since 1935 and has been chairman twice before. He and the third member, Wilbur C. King, said that a permanent chairman would not be decided until the vacancy is filled.

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Municipal System Downed

A $750,000 bond issue to finance a municipal electric and water system was rejected recently, 454 to 319, by the voters of DeQuincy, La. Gulf Public Service Co now has the franchise for both services.

5 Pacific Utilities Will Get 335,000 Kw of BPA Power

Largest Single Sale Ever Made by Bonneville Is for Firm Power —Government to Get $5,000,000

Five major Pacific Northwest private utility companies have signed contracts with the Bonneville Power Administration for delivery of 335,000 kw of power from Bonneville and Grand Coulee dams during the next year. The contracts represent the largest single sale ever made by Bonneville.

Signatories to the one-year contracts were Dr. Paul J. Raver, BPA administrator; Paul B. McKee, president of Pacific Power & Light Co; Kinsey M. Robinson, president of Washington Water Power Co; H. C. Webb, vice-president of Puget Sound Power & Light Co; Frank Warren, Jr, executive vice-president of Portland General Electric Co; and Z. E. Merrill, president of Mountain States Power Co.

The contracts guarantee Pacific Power & Light and Washington Water Power jointly 97,000 kw; Portland General Electric, 130,000 kw; Puget Sound Power, 97,000 kw; and Mountain States, 11,000 kw in addition to 10,000 kw received under an earlier contract.

The commitments are based on the amount of hydro power which could be generated in case the Columbia River's average flow decreased to as low a mark as has ever been recorded. Surplus above that amount also may be made available to the companies.

Dr. Raver estimated that the contracts will mean between $5,000,000 and $6,000,000 in guaranteed revenues to the federal government for the period covered.

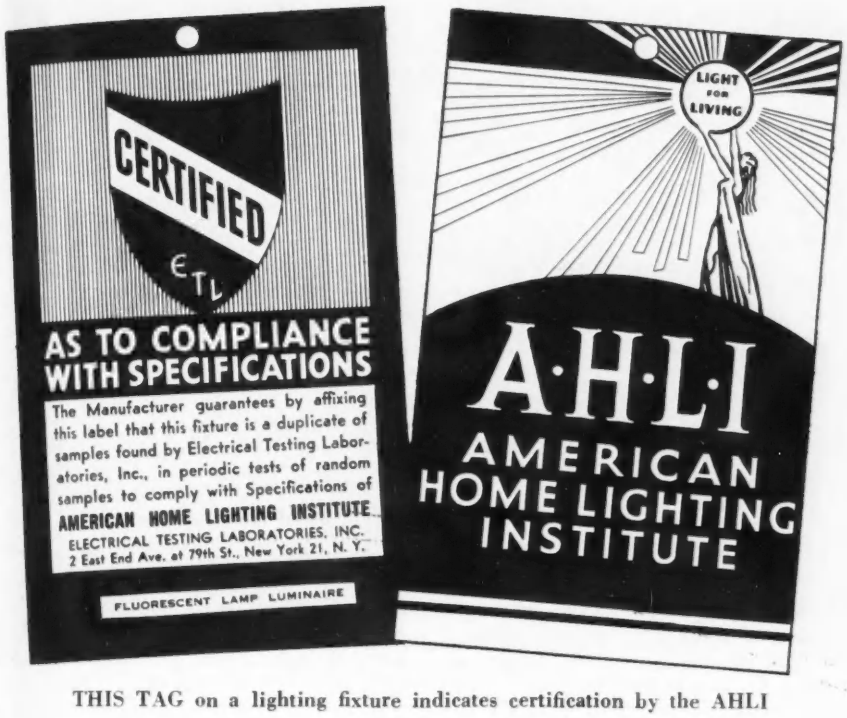
The companies serve approximately 700,000 customers. The amount of power called for in the contracts represents all that can be guaranteed over previous commitments, but it falls short of the needs of the distributing companies. Deficiencies must be made up by the operation of steam generating plants. To meet this situation the companies have joined in a cooperative agreement providing for the sharing of the cost of steam generation.

•

Ontario Hydro Criticized

The Hydro-Electric Power Commission of Ontario has been severely criticized by Maj Gen Howard Kennedy, Royal Commissioner of Forestry, for failure to clear forest areas before they are flooded. The commissioner feels that Hydro should first remove all trees.

MANUFACTURERS & MARKETS


CERTIFIED
ETL
AS TO COMPLIANCE WITH SPECIFICATIONS
The Manufacturer guarantees by affixing this label that this fixture is a duplicate of samples found by Electrical Testing Laboratories, Inc., in periodic tests of random samples to comply with Specifications of
AMERICAN HOME LIGHTING INSTITUTE
ELECTRICAL TESTING LABORATORIES, INC.
2 East End Ave. at 79th St., New York 21, N. Y.
FLUORESCENT LAMP LUMINAIRE
LIGHT FOR LIVING
A·H·L·I
AMERICAN HOME LIGHTING INSTITUTE

THIS TAG on a lighting fixture indicates certification by the AHLI

American Home Lighting Institute Adopts New Certification Program for Fixtures

A new certification program covering the lighting design and performance of all types of residential lighting fixtures has been adopted by the American Home Lighting Institute. The program gives recognition to the lighting performance recommendations of the Illuminating Engineering Society and utilizes the inspection and certification services of the Electrical Testing Laboratories.

The new program represents the establishment of lighting standards far beyond anything ever before conceived in the residential lighting fixture industry, Willard G. Sawyer, AHLI president, said. More than five years of research and study by the IES Residence Lighting Committee and the AHLI Specifications Committee preceded adoption of the program.

The specification for each luminaire includes required values for lighting of various space areas, comfort requirements such as shielding and brightness, illumination distribution, and efficiency.

Certification tags, testifying that the new fixtures conform to the specifications for lighting performance, mechanical construction, and electrical safety, will be affixed to each certified luminaire.

Under the terms of the program, manufacturer-members of AHLI will be required to submit samples of eligible fixtures to ETL for testing and inspection. Only those units found by exhaustive tests to conform to specifications will be certified. ETL field inspection service, providing for actual visits to plants by trained inspectors, will insure continuous adherence to established standards.

The new certified equipment is to be available shortly to support the planned lighting programs of utilities and other industry elements.

These manufacturers of residential lighting fixtures are AHLI members: Acme Lighting Products, Inc, Cleveland; Art Metal Co, Cleveland; Beacon Lighting Products Corp, Chicago; Centre Lighting Fixture Manufacturing Co, New York; Erie Glass & Manufacturing Co, Chicago; Frankelite Co, Cleveland; H. A. Framburg & Co, Chicago; Globe Lighting Products Co, Brooklyn; Halcolite Co, Inc, Brooklyn; Phil R. Hinkley Co, Cleveland; L. D. Kichler Co, Cleveland; Kirlin Co, Detroit; Lightolier Co, New York; Porcelier Manufacturing Co, Greensburg, Pa.; Markel Electric Products, Inc, Buffalo; Moe Brothers Manufacturing Co, Fort Atkinson, Wis.; Sylvania Electric Products, Inc, New York; and John C. Virden Co, Cleveland.

•

Philco Corp Announces Freezer Unit Expansion

In a further expansion of its refrigerator and freezer division, Philco Corp is acquiring the production facilities and all other assets of the Rex Manufacturing Co, Inc, of Connersville, Ind., John Ballantyne, president of Philco, has announced. For the past several years, Philco has purchased the entire refrigerator output of the Rex plants and has had an investment of $973,000 in the preferred stock of that company.

In acquiring the Rex company, Philco will issue a net total of 51,993 shares of its $3 par value common stock which has been authorized but not issued. Operations of the Rex Manufacturing Co will continue without any change under the direction of the present executive management, and no changes in policies or personnel are contemplated.

Philco has a backlog of refrigerator and freezer orders totaling approximately $98,000,000, and capacity operations to meet this demand will be required for a considerable period ahead.

•

General Electric Forms Airport Lighting Section

An airport lighting section, responsible for marketing lighting systems for large and small airports, has been established in the Lighting Division of the General Electric Co.

J. Penn Rutherfoord, lighting specialist in the company's Cleveland office, has been appointed head of the new sec-

tion, which will be conducted jointly with the American Gas Accumulator Co of Washington, D. C. The latter will furnish the lighting fixtures, and G. E. will supply the electric control equipment and assume responsibility for sales.

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Manufacturers Issue Earnings Reports

Among the electrical manufacturing companies that have recently issued earnings reports are the following:

SQUARE D—Six months, net profit, $1,861,786, compared with $775,880 earned in 1946 period.

BABCOCK & WILCOX—Including consolidated subsidiaries, six months, net profit, $3,146,211, equal to $4.68 a share. Company's proportion of net earnings of companies controlled and unconsolidated, less dividends received, were $730,958.

NOMA ELECTRIC—Sales for the first six months were $17.2 million against $9.4 million in the like period of 1946. "Unless something unusual happens, sales for the next six months should exceed $25 million, thus making a total for the twelve months in excess of $42 million against $32,373,092 for the full year 1946," Henri Sadacca, Noma president, stated.

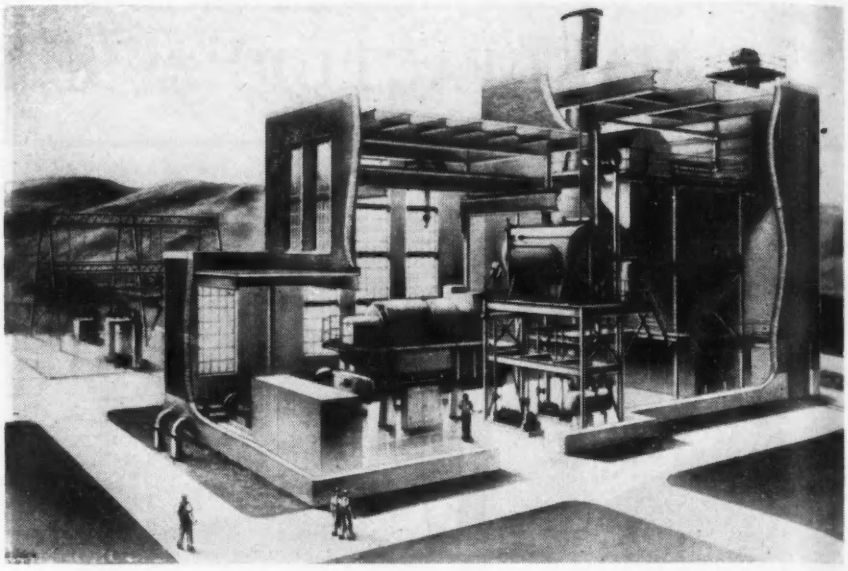
ELLIOTT CO—Net profit of $736,090 for the six months ended June 30, 1947, comparing with a net loss of $196,232 for the corresponding period of last year, which was primarily the result of a two-months' steel strike early in 1946. Shipments during the first half of 1947 totaled $9,294,116, an increase of 117 percent over the $4,290,776 for the first six months of last year. The company's present order backlog totals $26,000,000, compared with $17,476,000 a year ago.

THOMAS A. EDISON, INC—Including wholly owned subsidiaries, six months, consolidated net income, $659,014, equal to $1.51 each on 405,000 Class A and Class B common shares, compared with $34,261 net profit for 1946 period when operating loss was $218,623 before estimated tax carry-back credit. Consolidated net sales increased to $13,845,762 from $8,843,983.

FOSTER WHEELER—Six months, net profit, $90,239, or 10 cents a common share, contrasted with a net loss of $286,917, last year. Unfilled orders on June 30 totaled $81,026,002, compared with $35,350,500 a year earlier.

CONTINENTAL-DIAMOND FIBRE—Including wholly owned domestic subsidiaries, six months, net income, $510,980, or $1.11 a share, contrasted with net loss of $225,814 last year.

COPPERWELD STEEL—Six months, profit of $1,211,961 before taxes. After provision of $519,739 for federal and state income taxes and $300,000 set up as reserves for inventory fluctuations, net profit for six months period amounted to $392,222, equivalent, after allowance for dividends on preferred stock in the amount of $41,464, to 68 cents per common share on the 514,864 shares of common outstanding. The first six months of 1946 showed a net income of $50,540, equivalent to .02 cents a common share.



WESTINGHOUSE Electric Corp is manufacturing ten 5,000-kw "Packaged" power plants like this at its Sunnyvale, Calif., plant for use in foreign countries

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Manufacturers Make Sales Assignments

Electrical manufacturing companies have recently made the following appointments to their sales staffs:

ELECTRIC MACHINERY MFG CO, Minneapolis, has established a new sales office in Dallas, Tex., with H. L. Renking, formerly manager of the E-M office at Pittsburgh, in charge.

GLOBE LIGHTING PRODUCTS INC, Brooklyn, N. Y., has appointed Abe Waitzkin sales manager for the East Coast.

ANDERSON BRASS WORKS, INC, Birmingham, Ala., has appointed F. J. Schaefer Co, Kansas City, as new agent for Kansas and western Missouri, and Douglas J. Munhall Co, Buffalo, as agent for western New York.

SOUTHERN STATES EQUIPMENT CO, Hampton, Ga., announced the appointment of Carl L. Smith, formerly in the electric testing division of Birmingham Electric Co, as district representative for Alabama, with headquarters in Birmingham. He succeeds E. W. Halfmann, resigned. J. C. Howell, recently returned from six years of Navy service, has been appointed district representative for Georgia, with headquarters in Atlanta. Before joining the Navy, Mr Howell was with Georgia Power Co.

A. B. CHANCE CO, Centralia, Mo., has appointed Lloyd C. Woolard to its sales staff. Mr Woolard will establish an office in Kansas City, Mo., and his territory will include the states of Kansas, Missouri, Nebraska, Oklahoma and Arkansas. Mr Woolard was formerly Florida and south Georgia district manager for Locke Insulator. He has a 15-year sales and service background in the electrical industry.

10 Compact Power Units on Westinghouse Schedule

The manufacture of ten 5,000-kw unit power plants, a new engineering development that is greatly simplifying the installation of low-cost electric power plants, will begin soon in the Westinghouse Electric Corp works at Sunnyvale, Calif. The first four units to come from the plant, probably by mid-1948, are destined for Mexico.

Highly compact and standardized, the power plants are completely self-contained units requiring only the addition of a building to house them. They operate with either coal or oil as fuel, at any altitude between sea level and 6,000 ft, and are adapted to climates ranging from the Arctic to the tropics.

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F. L. Jacobs Co Sponsors Scholarship Foundation

F. L. Jacobs Co, Detroit, has announced the renewal of its sponsorship of the $25,000 Miss America Scholarship Foundation. Funds of the foundation will be distributed among the first 16 winners in the annual Miss America Pageant at Atlantic City, N. J., September 1-6, with a first prize scholarship, worth $5,000, going to the new Miss America. The fund is administered by a committee of university women under the chairmanship of Dr Guy E. Snavely, executive director of the Association of American Colleges.

In addition to the F. L. Jacobs Co, the fund is co-sponsored by the Catalina Knitting Mills, Los Angeles, and the Joseph Bancroft & Sons Co, Wilmington, Del.

NEWS ABOUT PEOPLE

Louisville Utility Elects Myers Vice-President

Promotion of Walter D. Myers, manager of the electric sales department, to director and vice-president in charge

W. D. Myers

of sales of the Louisville Gas & Electric Co, has been announced.

Mr Myers was first employed by the

J. R. Ramage

Kentucky Electric Co, a predecessor company, in 1908. In 1929, he became commercial manager, and in 1939 was promoted to the position of manager of electric sales. The appointment of Mr Myers fills the vacancy created by the retirement of Robert Montgomery, vice-president and a director.

J. Russell Ramage, assistant manager of electric sales, has been appointed manager of that department, succeeding Mr Myers, and E. V. Freeman has been promoted to the position of assistant manager. Mr Ramage has been with Louisville Gas & Electric Co for 36 years and Mr Freeman for 20 years.

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Freeman Elected President of North American Co

(See Front Cover)

Directors of The North American Co have elected Herbert C. Freeman as president. Mr Freeman, who has been vice-president of the company since 1927, succeeds Edward L. Shea, who resigned to become president of the Ethyl Corp. Mr Shea will continue as a director and a member of the executive and finance committee of the North American Co.

Before joining North American, Mr Freeman was a partner in the firm of Touche, Niven & Co, certified public accountants. He is a member of the American Institute of Accountants.

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▶A. H. Kessler has been appointed manager of the North Central Electrical Industries, Minneapolis, to succeed William A. Ritt, who resigned after serving in that capacity since the inception of the organization in 1936. Mr Kessler, over the same period, has held the position of promotion manager.

▶Richard F. Hartman has been appointed agricultural representative for the Central Power & Light Co., Corpus Christi, Tex. Formerly a county agent for the A & M College Extension Service, Mr Hartman will cooperate with authorized agricultural agencies and other groups in furthering power development in south Texas.

▶Robert O. Dehlendorf, for the past two years eastern district manager of the Emerson Electric Manufacturing Co, St. Louis, has joined the sales staff of Jack & Heintz Precision Industries, Inc, Cleveland, as eastern district sales manager of the electric motor division. Mr. Dehlendorf had been associated with Emerson Electric for 23 years, the first 15 in various engineering capacities, the final eight as key sales executive.

W. H. Klein Joins Staff of Gilbert Associates

William H. Klein has joined the consulting staff of Gilbert Associates, Inc, engineers and consultants, New York, Washington, D. C., and Reading, Pa. Mr Klein will direct that organization's activities in the solution of engineering and operating problems of the cement and rock products industries.

Mr Klein has been active in these industries for nearly 40 years. From 1933 to 1946 he was vice-president and

W. H. Klein

general operating manager for the Pennsylvania-Dixie Cement Corp in charge of operating, engineering and development of its properties. He severed this association to enter private consulting practice.

He is a member of various technical societies and at present is a member of the board of directors of the American Concrete Institute. Mr Klein will make his headquarters at Gilbert Associates' general offices in Reading, Pa.

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▶Robert C. Karrer has been appointed superintendent of station construction of the Columbus and Southern Ohio Electric Co, Columbus. In this capacity, Mr Karrer will have charge of all field work of the construction projects which may be assigned to his department, reporting to General Superintendent C. Z. Gillivan. Daniel H. Vogel, who during recent years has devoted a part of his time to station

construction work, will now apply all of his time to the office of production engineer, in which capacity he will supervise all activities of the generating plants, reporting to Superintendent of Power O. H. Cleveland.

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Acme Electric Elects Miller Vice-President

Edward A. Miller has been elected vice-president of the Acme Electric Corp, Cuba, N. Y., in charge of engineering. Mr Miller joined the Acme organization in 1930.

E. A. MILLER

His first project for the company was improving the design, performance and expanding the line of luminous tube transformers. Bringing into play his knowledge of design and construction, Mr Miller contributed many important engineering features to the production of the company's step-down transformers, air cooled power transformers, fluorescent lamp ballasts and cold cathode lighting transformers.

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▶ ARTHUR KOEHLER has been appointed production manager of Sorensen & Co, Stamford, Conn. Mr Koehler was formerly with the Arma Corp in Brooklyn, N. Y., and with the Langevin Co of New York in a similar capacity.

▶ VINCENT P. MCDEVITT, one-time chief counsel of the Pennsylvania Utilities Commission, has been named general counsel in charge of the Legal Department of the Philadelphia Electric Co, succeeding the late Bernard P. Carey.

▶ FREDERICK W. FISHER, for the past 20 years director of personnel and public relations for the Rochester Gas & Electric Corp, has retired. Mr. Fisher had been identified with the Rochester utility for more than 38 years.

OBITUARY

▶ LOUIS E. STILES, assistant sales manager of the Cleveland Electric Illuminating Co, died on August 27 at the age of 68. Born in Cleveland, Mr Stiles joined the utility company after graduating from college. He left to work for the Lakewood Engineering Co and then organized his own engineering company. Subsequently he returned to the illuminating company.

▶ ROBERT PLOWE, advertising manager of Commonwealth Edison Co, died on August 22 of a heart attack at his home in Chicago. He had been in ill health for some time. He was 58 years old. Mr Plowe was a veteran of 36 years in the advertising field. Before entering the employ of the utility in 1937, he had served in various advertising capacities with Marshall Field & Co, International Harvester Co, the *Chicago Daily News*, the *Chicago Tribune*, Hotpoint, Inc, and two advertising agencies. He was appointed advertising manager of Commonwealth Edison in 1939. Prominent for several years in the Public Utilities Advertising Association, Mr Plowe served as third vice-president of the organization during 1945-46.

▶ HAROLD E. DOZER, Cleveland, district manager for the National Electric Products Corp, Pittsburgh, Pa., and one of the founders of the Electrical League of Cleveland, died on August 22 at the age of 58. Mr Dozer worked for the Lakewood Electric Co and was part owner of the Forest City Electric Co before joining the National Electric Products Corp, 20 years ago.

▶ THOMAS F. RICE, 57, for the past decade manager of the Boston office of the Hartford Steam Boiler Inspection & Insurance Co, died suddenly on August 8. A native of Hartford, he joined the company about 40 years ago as an office boy, later became special agent and then assistant manager at Boston.

▶ WALTER JACKSON, consulting engineer, died on August 26 in New York after a brief illness. He was 65 years old. He had been a consultant on fares and service in city and suburban transportation fields for more than 20 years. Before entering private practice, Mr Jackson had been with the McGraw-Hill Publishing Co as a member of the editorial staff of *The Electric Railway Journal* and later as its associate editor and then as business manager. Before entering the field of technical journalism he was employed by the C. W. Hunt Co of New York and the Westinghouse Electric Corp. During the recent war, he was with the Office of Defense Transportation in Washington. Mr Jackson was born in Neukirch, East Prussia.

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Carleton E. Torrey

Carleton E. Torrey, who retired as vice-president and general manager of the Ohio Power Co, Canton, in 1944, died in that city on August 15. He was 68 years old. When he retired Mr Torrey had been connected with the electric utility business for 45 years.

He started in 1899 with the Lake Superior Power Co at Sault Sainte Marie, Ont., and then joined the Janesville Electric Co at Janesville, Wis., as assistant manager. He became identified with the Canton Electric Co in 1911 and was occupying this position when the company became a part of the Ohio Power Co. After a connection with the Atlantic City Electric Co, he returned to Canton in 1923 as general manager of the Ohio Power Co and was elected vice-president at a later date.

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▶ HERBERT J. DRANE, who spent more than 40 years in public service as a congressman for Florida, president of the Florida Senate and a member of the Federal Power Commission, died on August 11 at his home in Lakeland following an illness of a year. Mr Drane was born in Franklin, Ky., 84 years ago.

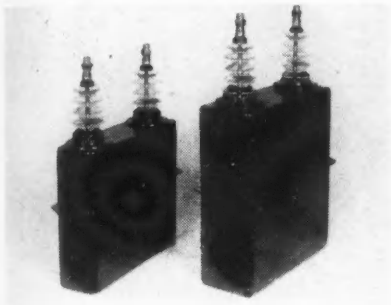
▶ BERNARD F. MULDOON, head of the production department of the United States Electric Manufacturing Corp, New York, died on August 19 at his home in Verona, N. J. He was 52 years old. Born in St. Louis, Mr Muldoon joined the company 27 years ago. He obtained more than 60 patents on electrical devices, including Canadian and British ones.

▶ GEORGE A. ELZ, 51, head of electrical operation at Boston Edison's Edgar station, died at Belgrade Lakes, Me., August 18. He was a graduate of the Massachusetts Institute of Technology and joined the company in 1925. Mr Elz was a former chairman of the New England System Operators Club. He attained his late post about 15 years ago.

▶ JOHN H. EMERY, vice-president of Roberts and Mander Corp, Hatboro, Pa., died in Orange, N. J., on August 24 at the age of 49. Mr Emery had been connected with Roberts and Mander since 1945 and became a vice-president last March.

NEW EQUIPMENT

Distribution Capacitors



NEW 25-KVAR Pyranol distribution capacitor units for individual and group pole mounting have been announced by the Capacitor Section of the General Electric Co, Schenectady, N. Y. Engineers point out that 225 kvar may now be accommodated on one crossarm, compared to the former 180-kvar limit using smaller rated units.

Use of the new capacitors involves fewer units to be handled, less exposed surfaces to the weather, and fewer hangers, bushings and connections. The small relative increase in size of these units over the manufacturer's present 15-kvar units permits these 25-kvar capacitors to be used on the same universally standard hangers used for 10- and 15-kvar units.

These new power-factor improvement capacitors also use the recently announced cast glass bushings which permit a mechanically strong, hermetic seal that is permanently moisture-tight.

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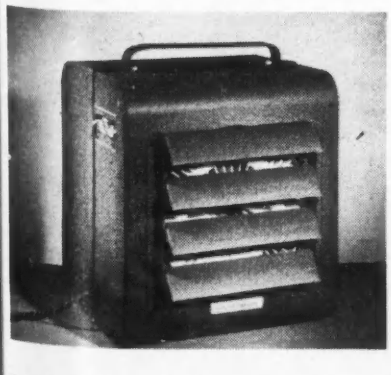
Milk House Heater

TO SAFEGUARD milk in milk house and dairy plants and to keep surroundings dry and free from possible contamination due to condensation, an all-electric heater is now being produced by Electromode Corp, Rochester 3, N. Y. It distributes fan-circulated heat and can be thermostatically equipped for complete automatic control.



These heaters are equipped with a heating element used for heaters on U. S. submarines—the resistor is enclosed within a metal tube which is embedded inside a finned aluminum casting. Consequently there are no hot wires or glowing resistors and no fire hazard, it is stated. Heater is 13 in. high, 11½ in. wide, and 11¼ in. deep. and available for commercial voltage. It can be easily mounted on wall or ceiling supports, and a suitable handle is furnished for moving from place to place as desired.

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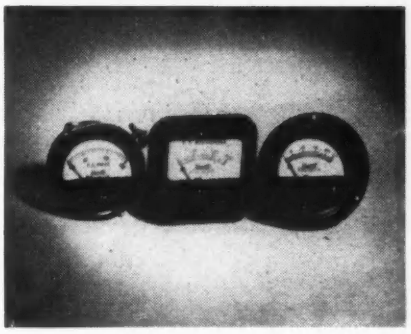
Panel Instruments

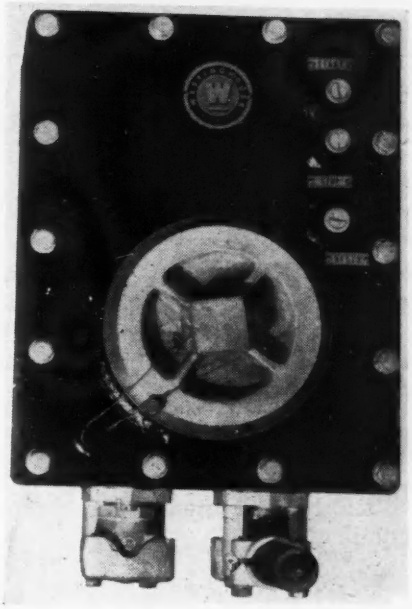


A LINE of a-c and d-c, 2-in. and 2½-in. panel meters in two models of round cases and one model of a rectangular case have been developed by Shurite Meters, 99 Hamilton St, New Haven 8. Conn. All d-c meters are polarized-vane, solenoid type; a-c meters are double-vane, repulsion type. Both are stated to be accurate within 5 percent.

Instruments and listed capacity ranges available are: a-c and d-c ammeters up to 50 amp, a-c and d-c milliammeters up to 500 ma, a-c, and d-c voltmeters up to 750, and resistance meters for 10,000 ohms. The meters are calibrated for non-magnetic panels.

All models are flush-mounting type of black enameled brass construction. Brackets, ring, or screw mounting, narrow or wide flange denote design differences. Dials are metal and lithographed in black and white for high visibility.

D-C Linestarter



A NEW explosion-tested linestarter that has passed tests of the U. S. Bureau of Mines is available from Westinghouse Electric Corp, East Pittsburgh, Pa. It is for use with d-c motors up to 5 hp on circuits of 80, 115, 230 and 550 v, which may be safely started by connecting directly to the line.

Overload protection is provided by an inverse time limit thermal overload relay. Short-circuit protection is provided by a fuse. Pushbutton and reset button are mounted in the cover. Pushbutton may be located remotely if desired. All operating mechanism is enclosed in a welded cabinet of heavy steel plates. A hand hole in the cover facilitates replacing fuses or heaters.

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Selenium Rectifiers

A NEW LINE of miniature selenium rectifiers to replace rectifier tubes in vibrator supplies and radio sets is now being manufactured by the Seletron Division of the Radio Receptor Co, 251 West 19th St, New York 11, N. Y. Sizes are: model 5M1, a 100-mil 5-plate stack 1x1x⅞ in., Model 5P1, a 150-mil 5-plate stack 1⅛x1⅛x⅞ in.; and model 5Q1, a 250-mil 5-plate stick 1½x1½x⅞ in. Savings in space, cost, assembly time, also cooler operation, are claimed.

ELECTRICAL BUSINESS OUTLOOK

ELECTRICAL MANUFACTURING should prove a pillar of strength in the over-all business picture next year. New orders have held up well through mid-year—sufficient to maintain order backlogs substantially unchanged.

Output, on the other hand, now shows signs of leveling off. Shipments have been running between $600 and $625 million monthly, not much more than in the early spring months. And most of the recent gain in dollar totals can be attributed to higher prices.

The lofty level of this current plateau is evident from a comparison with pre-war days. Shipments in mid-1941 totaled approximately $300 million monthly.

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SHEET STEEL CONTINUES to be the biggest headache among materials shortages. And hopes for early relief have gone glimmering.

that many believed would ease the situation by Neither output nor demand have taken the turn Autumn.

Completion of new capacity for sheet and strip has lagged badly. Much of the 2½ million tons of new plant originally scheduled for the first half of this year will not be ready until 1948.

Revised timetable now calls for about 1.2 million tons of new capacity in second half 1947; 1.04 million tons in first half 1948; and a further 630 thousand tons over the remainder of 1948.

This is about 440 thousand tons more than originally planned. It would leave total capacity some 3.62 million tons higher than in mid-1941.

An expansion of this size—about one-fifth since mid-1941—may still leave sheet and strip very tight next year.

Key to the steel outlook lies in the export picture. It is already clear that any plan for assisting Europe that accords with the Marshall suggestion will call for substantial shipments of sheet and strip. Relative to the needs of fabricators, this item is even more short in Europe than it is here.

Large scale aid to Europe will also absorb considerable sheet and strip steel indirectly. Machinery, trucks, and freight cars all stand high on the list of essential items.

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EXPORTS OF ELECTRICAL APPLIANCES will be hurt by failure of the British to make a go of convertability.

About half of Britain's drastic dollar drain after July 1 was to South America. These countries needed the dollars to pay for their heavy imports from this country.

The dollar pinch already is hurting South American trade. A number of countries have been forced to ration dollars more carefully. And electrical appliances are among items being cut down.

Both Britain and South America will now encourage a larger two-way trade. Britain finds it essential to buy from South America. To do so it must divert an enlarged share of its exports to that continent. It remains to be seen whether British electrical goods will be among those forced into the new channel.

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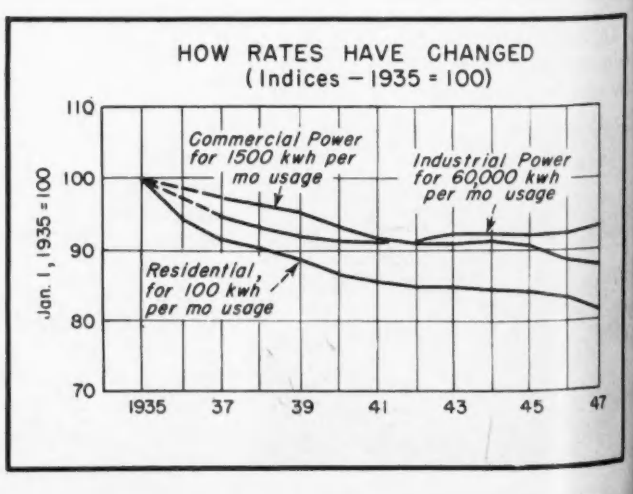
CHANGES IN ELECTRIC RATES during 1946 show a more mixed pattern than expected. This is the conclusion to be gained by a careful reading of the new FPC study on Typical Electric Bills. (See chart)

Residential rates led a parade downward. Customers in 100 out of 204 cities (population more than 50,000) were beneficiaries. Commercial rates also turned lower, extending a movement begun in 1943.

But the average charge to industrial power users again inched upward.

As already pointed out on this page (ELECTRICAL WORLD, June 28, page 30), 1947 is seeing the downward move in residential and commercial rates slowed, if not arrested. At the same time,, rising costs are forcing industrial rates higher.